

JANUARY, 1958

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2208.1 Kc.	5633.333 Kc.	6275 Kc.	6875 Kc.	7200 Kc.
2242.5 Kc.	5635.333 Kc.	6300 Kc.	6900 Kc.	7225 Kc.
2243 Kc.	3700 Kc.	6325 Kc.	6925 Kc.	7250 Kc.
2732 Kc.	5725.222 Kc.	6350 Kc.	6950 Kc.	7275 Kc.
2750 Kc.	5725 Kc.	6375 Kc.	6975 Kc.	7300 Kc.
2975 Kc.	3744 Kc.	6400 Kc.	7000 Kc.	7325 Kc.
2990 Kc.	5750 Kc.	6425 Kc.	7025 Kc.	7350 Kc.
3380 Kc.	5775 Kc.	6450 Kc.	7050 Kc.	7375 Kc.
3500 Kc.	5825 Kc.	6475 Kc.	7075 Kc.	7400 Kc.
3533 Kc.	5850 Kc.	6497.5 Kc.	7100 Kc.	7425 Kc.
3535 Kc.	5852.5 Kc.	6500 Kc.	7101.75 Kc.	7450 Kc.
3537 Kc.	5875 Kc.	6522.5 Kc.	7102 Kc.	7475 Kc.
3892 Kc.	5900 Kc.	6535 Kc.	7108 Kc.	7500 Kc.
3925 Kc.	5925 Kc.	6547.5 Kc.	7121.75 Kc.	7525 Kc.
4096 Kc.	5950 Kc.	6550 Kc.	7125 Kc.	7550 Kc.
4172 Kc.	5975 Kc.	6561.11 Kc.	7132 Kc.	7575 Kc.
4205 Kc.	6000 Kc.	6575 Kc.	7138.2 Kc.	7600 Kc.
4285 Kc.	6025 Kc.	6600 Kc.	7150 Kc.	7625 Kc.
4445 Kc.	6050 Kc.	6625 Kc.	7175 Kc.	7650 Kc.
4460 Kc.	6075 Kc.	6650 Kc.	7190 Kc.	7675 Kc.
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4930 Kc.	6125 Kc.	6725 Kc.	7150 Kc.	7750 Kc.
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VK3W: Sundays, 1100 hours EST, 7146 Kc.; 1930 hours EST, 144 Mc. No frequency checks available from VK3W. Intra-state working frequency, 7080 Kc.

VK3W: Sundays, 1130 hours EST, simultaneously on 3572 and 7146 Kc., 57.5 and 146.35 Mc. Intra-state working frequency 7138 Kc. Individual frequency checks of Amateur Stations given when VK3W is on the air.

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VK6W: Sundays, 0830 hours WEST, on 7146 Kc. No frequency checks available.

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EDITORIAL



INTERNATIONAL CONFERENCE

At the commencement of a New Year it is usual to consider plans for the future after having viewed the past in retrospect. Such inspection will inevitably result in steering a future course to avoid the pitfalls of the past. The Institute is no exception on this theme and believes it is always possible to improve on past performances.

A case in point was representation at the 1947 Atlantic City Conference when some ground was lost. There the Amateur had little say—in fact, he only obtained official recognition there and became part of the Amateur Service, a just reward for years of usefulness to the community at large. Although this gain in status gave the Amateur more weight throughout the world, other communication interests have become stronger and more demanding in the interim to offset this initial advantage.

It is quite obvious that the Amateur voice raised at the next Conference must be "loud and clear"—it must be a united voice and not one spoken through Government proxies who have so many other interests to defend. There are several preparatory steps which must be taken before even a delegate can proceed. The first is Government accreditation, the second is a clear and concise brief of Amateur requirements to the official delegate for Australia, and the next is parallel purpose with other Amateur delegates from overseas societies. When actually at the Conference, the Amateur representative must keep a close watching brief on matters affecting him and be in a position to

answer queries or give advice to the official Government delegates.

A "loose man" (the Amateur representative) could be very usefully employed in the communications "field" at the Conference. He would be in a position to listen in to many of the plenary and technical discussions that may preclude an official delegate because of other duties. He could thus become a beneficial adjunct to the Australian delegation as a whole on all matters which concern them.

The first two points raised above will be important matters your Executive have as priority tasks for this year. The Federal Secretary is later this year going overseas on a world tour, and it is his intention to hold discussions with the larger overseas societies on all the aspects of co-ordination of requirements and a unanimity of effort by those attending.

The important matter of whether to send an Amateur delegate or not is left to you, the members. It does not appear easy to find the necessary £1,500 to £2,000 for a delegate, but when this amount is spread over 3,000 odd Amateurs it does not look nearly so formidable.

You can see that the preliminary steps are in hand to see that your interests are guarded and properly represented, but this cannot be brought to fruition without your help. At the appropriate time, the Divisions will be asked for their support—can you afford NOT to support your Division and your hobby and the whole future of the Amateur in Australia?

FEDERAL EXECUTIVE.

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Harmonics and Selectivity of Transmitters

PART TWO

BY HANS RUCKERT,* VK2AOU

SELECTIVITY OF TUNED CIRCUITS

WITH DIFFERENT Q VALUES

John L. Reinartz published some interesting figures giving us the attenuation of harmonics achieved with a single tuned circuit and with two coupled circuits depending upon the Q. The ratio figures are in db. comparing the power of the harmonic with that of the fundamental. Each 10 db. represents an attenuation of the harmonic to one-tenth. Minus 40 db. is, therefore, equal to one-ten thousandth of the power level and is the same as a voltage ratio or a current ratio of one-hundredth. In other words, if the fundamental was 100 volts of r.f., the harmonic would now be 1 volt. We see that we have a long way to go before the harmonics are down to microvolt strength.

Q	2nd Harm.	3rd Harm.	4th Harm.
For a single tuned circuit—			
5	-23.5	-32.0	-37.5
10	-29.6	-38.1	-43.5
15	-33.0	-41.6	-47.0
20	-35.6	-44.1	-49.6

For two coupled tuned circuits—			
5	-33.2	-54.4	-76.8
10	-50.2	-67.4	-88.8
15	-57.3	-75.1	-98.2
20	-62.3	-79.4	-100.8

These figures show us clearly that a tank circuit alone has no chance. If we do not couple very tightly, an antenna coupler will help a good deal (compare values in two tuned coupled circuits above). The same author mentions some interesting calculations. Up to a distance of 650 feet, the field strength of a horizontal dipole can be calculated as:

$$E \text{ (volts/metre)} = \sqrt{P} \div d$$

where P = power in watts
d = distance in feet.

Or the power in microwatts is:

$$P = 1880 (E \times d)^2$$

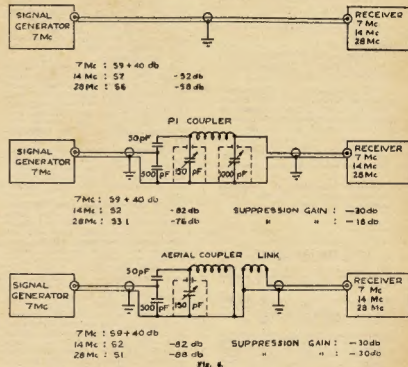
The minimum picture carrier field strength for a good picture is 500 $\mu\text{V/m}$. On the picture carrier we can only tolerate an interfering signal if it has a field strength of 1/100 or 5 $\mu\text{V/m}$. With the above-mentioned formula we arrive at 0.012 μwatt for the interfering signal. This means that with a transmitter of 100 watts fundamental power, we need about -100 db. power reduction for the harmonics, which is a power ratio of 10^{-10} , or 1/10,000,000,000 if the distance between the transmitter and the receiver is 500 feet. Your neighbour's t.v. antenna may be only 50 feet from your beam. Fortunately the case is seldom so bad because our harmonics may not fall on the picture carrier frequency. If the harmonic is about three megacycles away from the carrier and outside of the receiver pass-band, we may get away with 100 times stronger interfering signal.

IS THE PI-COUPLER THE ANSWER?

On page 63 of February '56 "QST" we read: "Checking of harmonics at output important. One of the simplest ways to invite an F.C.C. citation is to assume that any new rig with a pi-coupler is absolutely foolproof on the A.R.R.L. Official Observer. The 7.6 to 8 Mc. (7.15 to 7.6 Mc. in VK) range is much more filled with harmonic emissions than ever in the past."

U.S. manufacturers build pi-network tank circuits in their transmitters to make bandswitching of shielded transmitters easy and to allow various antennae to be used. Also low-pass filters can easily be connected in this

A pi-coupler was then placed between the generator and the receiver (Fig. 5, centre). A matching voltage set-up capacitor chain had to be used on the generator side. This has nothing to do with selectivity provided by the pi-coupler. The two pi-coupler capacitors were fully shielded and had air dielectric. Care was taken so that practically no signal could get around the pi-coupler. We were disappointed. The second harmonic was only attenuated 30 db. and the 4th harmonic only 18 db. Nothing was changed on the generator or receiver, the additional attenuation being read on the calibrated S meter to reduce the chance of error.



case. The advertising claim is "I.V.I. suppressed" and not I.V.I. proof!

Test.—The writer was very interested to see just how good a pi-coupler is in regard to harmonic suppression. We suspected that many of the authors of book and magazine articles who recommend the pi-coupler as "the shot" against the radiation of harmonics may not have actually tested it fully.

A signal generator was tuned to 7 Mc. and a 10 mV. output was selected to ensure that some harmonics could be detected from the generator. A coaxial cable was directly connected to a well shielded highly selective double conversion receiver. Fig. 5 (top) shows the set-up. The 14 and 28 Mc. harmonics were compared with the 59 plus 40 db. signal on the 7 Mc. fundamental.

Fig. 5 (lower) gives the result of the last test, where the pi-coupler was replaced by an ordinary antenna coupler with a link to the receiver. Although this test was repeated several times, the result was always the same—the 2nd and 4th harmonics were both down -30 db. Connecting the receiver link direct to a tap on the coupler coil resulted in a lower attenuation than with the pi-coupler.

After this, the pi-coupler does not seem to be "too hot!" Theoretically, the pi-coupler looks like a low-pass filter, but at these frequencies we cannot say that a 0.001 μF (1,000 pF) capacitor with leads and rotor contacts is free of inductance and so we do not get

* 28 Berclie Road, Beverly Hills, N.S.W.

It appears that the inductively coupled link is a better separating method. The difference is not so serious that we must condemn the pi-coupler and go to a lot of trouble to make the p.a. tank and antenna coupler rolls bandswitching, but we must not expect the pi-coupler to provide the answer to all the harmonic radiation and selectivity problems.

We have seen where the harmonics come from and that there is just as much a selectivity problem as with receivers. Harmonics generated in the class C p.a. appear just as strongly in the aerial with the best shielding applied to our transmitter construction as with no shielding whatsoever, because they can go along the "honest way", amplified in the valves and in the not-too-selective tuned circuits.

If a not-too-well shielded chassis is radiating, it may not be so bad as the harmonics may not even reach our back fence, but this statement is not quite correct because with an r.f.-hot chassis we have less chance to reduce harmonics with a low-pass filter or even an antenna coupler, so shielding is still highly recommended.

Shielding without enough selectivity can never give a transmitter a low output in harmonics if a class C stage is used as the driver and final.

ACKNOWLEDGMENT

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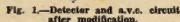
Acknowledgment is given R.C.A. and A.W.V. Co. Pty. Ltd. for reprinting data published by L. Reinarts in "Radiotronics" No. 137, May-June, 1948.

50 Mc. W.A.S.			
Call	Cer. Add. No. Cntr.	Call	Cer. Add. No. Cntr.
VK3WJ	13 4	VK3AEZ	10 1
VK3PJ	5 3	VK3BA	11 1
VK3VW	9 3	VK3GM	12 1
VK4RY	3 2	VK3ACL	14 1
VK4HR	4 2	VK3ZD	18 1
VK3LC	1 1	VK3RO	17 1
VK3DW	6 1	VK3ABC	9 1
VK3RS	6 1	VK3WH	15 1
VK3HT	7 1		

THERE seems to be quite a lack of information available to short wave listeners and associate members on 1155A receivers. My efforts to obtain such information have been in vain. The aim was to alter minor portions of the receiver to suit requirements at this location. My power comes from a lighting plant of 24/32 volts d.c.

The circuit features r.f. stage (6U7), mixer (X66), two i.f. stages (6U7s) at 560 Kc., giving a bandwidth of 5 Kc. The high frequency osc. is set on the high side. Diode detection is used. This and the output are in one tube, a 6HL6. Another such tube is used for b.f.o. and a.v.c. A tuning indicator is also used.

The d.f. units are VR90s (V1 and V2) as serial switch valves, V9 is a VR102 (a double triode) as meter switch.



I also removed the cumbersome switch marked "a.v.c., balance" etc. In its place I have fitted the Q multiplier, as featured in "CQ" of Jan. 1955. Also fitted the a.v.c. on/off switch to the original "filter" switch, having removed the "high pass" filter transformers. Other parts removed were meter balance, meter deflection, and aural sense controls.

For r.f. gain, I use a 5,000 ohms carbon potentiometer, which is placed under the tuning knobs with the tone control to balance the appearance.

Having struck trouble with the b.f.o. coil (which is 280 Kc.—the second harmonic being used), I substituted a

V6 (2nd i.f.) was also replaced with a 6J8, using the triode section as the b.f.o. "tube", coupling being taken care of automatically (remember I am on low volts d.c.). A germanium diode (type GEX44) is used as detector. The audio is a 12SQ7 and 12A6 placed at opposite end of chassis and occupying positions of V1 and V2. For 6v. chaps a 6J7 and 6V6 is the best.

No noise limiter is fitted as it is not required at this location.

High tension should be limited to a maximum of 200 volts.

The a.v.c. is very simple and allows me to change bands without having to turn the volume up or down as the case may be. I do not use delayed a.v.c. to overcome any primary loading as is so often done by taking it to a diode. No a.v.c. is on the converter tube.

I will be pleased to answer any queries on the above receiver.

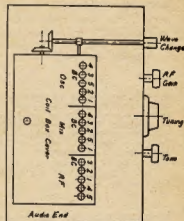


Fig. 2.—Plan of Coil Box of 1155A.
Tuning Range

- | Position | Frequency Range |
|----------|---------------------|
| 1 | 7.5 Mc. to 18 Mc. |
| 2 | 3.0 Mc. to 7.5 Mc. |
| 3 | 600 Kc. to 1500 Kc. |
| 4 | 200 Kc. to 500 Kc. |
| 5 | 75 Kc. to 200 Kc. |

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MODEL "1XA" CRYSTAL MICROPHONE INSERT



AUSTRALIAN MADE — — FOR AUSTRALIAN CONDITIONS



FITTED WITH PLATED REAR SHIELD TO ELIMINATE HUM PICK-UP

- Patented crystal unit guarantees outstanding efficiency and performance.
- Protected against ingress of moisture with approved moisture sealed crystal element.
- Small — compact — lightweight — durable.
- Will not blast from close speaking.
- Precision engineering ensures realistic reproduction and high output with long life and dependable operation.

- The only unit available with a genuine sintered metal filter.
- Good high frequency response ensures excellent speech reproduction.
- Aluminium diaphragm mechanically protected and frequency controlled by "Zephyr" filter.
- Australian made throughout.
- Only carefully selected cements used throughout, to suit Australian climatic conditions.

TECHNICAL DETAILS

Rochelle salt crystal microphones are perhaps the most widely used for all types of service where quality speech and music reproduction at high output levels is a requirement. They are dependable in performance and when fitted with the appropriate "Zephyr" filter, their frequency response may be adjusted to suit any application or requirement.

This crystal microphone requires to be terminated with a high value parallel load of the order of 1 to 5 megohms for best results.

The mass of the moving parts is small, hence the sensitivity is high and a high efficiency is achieved.

Light gauge solder lugs are provided so that excessive heat in soldering will not be transmitted to the crystal element.

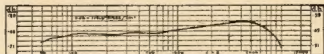
When mounted in a microphone cage, it is recommended that the insert be suspended in rubber, to eliminate shock and vibration.

One of the connecting lugs is directly connected to the case and care should be taken to solder the metal shield of the microphone cable to this solder lug, keeping the unscreened portion of the centre conductor as short as possible to eliminate hum pick-up.

All crystal elements are mounted on high grade suspension pillars, being fixed thereto with a good quality cement, thus ensuring stability and long life.

Case $1\frac{1}{2}$ " diameter (rear), $\frac{3}{8}$ " thickness, 1-13/16" overall diameter (front) with filter fitted.

Frequency Response = 60-6,500 c.p.s.
Output Level = -45 db (6 db = 1 volt/dyne/cm²)
Impedance = Model 1XA Grid 1 — 5 megohms.



Approximate Frequency Response Curve

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HOW'S YOUR SOLDERING?

PRACTICAL POINTERS ON MAKING GOODS JOINTS

BY JOHN E. MAGNUSSON, W0AGD

UNDERSTANDING the art of soldering always has been necessary for the radio constructor, and since the introduction of kits for the Amateur, the need is more apparent than ever because of the more complex equipment being put together by beginners. We hope that the following may be of as much interest to the old timer as to the new member of the club excitedly unpacking his first kit of electronic parts.

In order to understand some of the difficulties encountered in soldering it is necessary to appreciate exactly what it is that we are attempting to accomplish. Soldering is the bonding together of two similar (or dissimilar) metals by means of a third metal which exhibits the property of adhesion when in the molten state. The melting temperature of solder, a mixture of tin and lead, is determined by the percentage of tin. The proportions of tin and lead are usually indicated by the manufacturer, 50-50 being a common mixture for electrical work.

The principal obstacle to good soldering is oxidation. The rate at which a metal oxidizes is a measure of its resistance to the adhesive property of the solder. Aluminum will oxidize at a rate practically equal to that at which the melting solder is applied, so regardless of the size of the soldering iron or the melting temperature of the solder, attempting to solder aluminum turns out to be an exasperating ordeal as long as the oxygen ever present in the air is in contact with the aluminum. The thin coating of aluminum oxide that forms will not allow the solder to adhere to the clean metal directly below.

You say you can't construct a vacuum chamber in order to solder two pieces of aluminum together? No need to, since the application of high viscosity oil or grease immediately on cleaning the surface to be soldered will protect it from the atmosphere and allow the melted solder to gain access to a clean surface. Even so, the amount of energy expended in the preparation of the surface before applying the flux will be reflected in the degree of success obtained. This also holds true for other metals than aluminum; stubbornness to the adhesion of solder with any metal merely indicates the presence of oxidation in varying degrees. Soldering two new and shiny pieces of copper together is a real pleasure. So the first rule is that the two surfaces to be soldered must be clean and bright.

THE IMPORTANCE OF PROPER HEAT

Contrary to the general impression, there is a great deal more to soldering than merely melting the solder with an adequate amount of heat and piling

● Everybody knows how to solder—or so they think. It will pay to read this, just in case you may have missed one or two of the fine points.

it neatly (or otherwise!) on the junction to be bonded. Surprisingly, there are more people soldering poorly than there are doing an adequate job of soldering. Manufacturers selling equipment in kit form will concur that the largest percentage of trouble experienced by customers is directly traceable to the inability to solder properly.

Take the example of the too-common "rosin joint" or "cold joint." When several connections have to be made to a single tie point the result will often be a cold or rosin connection unless proper precautions are observed. As heat is applied to the solder and the connection, the rosin flows around each individual conductor connected to this particular tie point in order to keep the metal clean and free from oxidation for the solder to follow. If an inadequate amount of heat is applied the rosin will not be displaced by the solder, and as the connection cools a thin coating of rosin actually insulates each connection from the other and the tie point. In a circuit where an appreciable amount of voltage is applied the rosin film may break down and may never become evident to the builder. However, the connection might be for the grid of the first audio stage, where we are dealing with a few hundredths of a volt, and in that case we could just as well have left the connection out of the equipment for all the good it will do.

By the same token, excessive heating of a connection will have the same unhappy effects. The solder itself will oxidize when overheated. All of us have had the experience of picking up a soldering iron after a long period of heating on the stand and finding it practically useless. The grey and granular-looking appearance of the tip indicates oxidized solder. Eventually this gives way to a crusty black copper oxide which makes the iron useless until retinned.

Overheating of the connections may also have more serious consequences than a poor connection electrically. The values of composition resistors will change very appreciably with excessive heating, and the semi-conductor devices employed in some circuits may be destroyed. A little common sense goes as far in soldering as it does in any other endeavour; use enough heat to make the solder flow freely but don't apply the iron any longer than is necessary to make a good joint.

APPLYING THE IRON AND SOLDER

The old saying about the craftsman and the condition of his tools certainly applies when one considers the tip of the soldering iron—called, more correctly, the "soldering copper." This copper tip will oxidize at an alarming rate when heated unless it, too, is protected from the atmosphere with a thin coating of solder. During an evening session of soldering it is advisable to wipe the tip clean occasionally with a dry cloth and replace the excess solder just removed with a fresh supply. A heat-regulating stand also will add greatly to the life and usefulness of the instrument.

With the tip of the soldering iron in top condition, and using a good grade of solder with a rosin core, one should be able to place the tip on one side of the connection to be soldered and the solder on the opposite side and actually pull the melting solder through the junction as it becomes heated to the proper temperature.

In order to provide maximum heat transfer from the tip to the connections to be soldered, it is usually desirable to melt a small amount of solder between the tip and the connection before moving the supply of solder to the other side. But don't attempt to solder by melting the solder against the tip and letting it run onto the work. This will burn up the rosin before it gets a chance to do its job of cleaning the way for the solder itself.

Once the solder is flowing smoothly through the connection there is no need to pile on an excessive amount of solder since it will add little, either electrically or mechanically, to the connection. When in doubt as to the reliability of a given connection merely reheat it, adding the minimum possible amount of solder, and see whether there is any evidence of rosin boiling up through the melted solder. Again keep in mind that prolonged heating of a connection may have the same ill effects as inadequate heating.

It is generally safe to say that the ease with which the connection takes the solder is a good indication of the reliability of the joint. Connections that seem to take twice as long and twice as much solder as normally expected should be examined closely; the possibility that the solder has flowed away from the joint to nearby connections is ever present. This form of short circuiting is quite common in the crowded areas around tube socket terminals and the terminals of multiple tie points. Such a difficulty is usually indicative of excessive oxidation of the leads or terminals, and usually a small amount of scraping is necessary in order to achieve the proper electrical connection. Patience is a very rewarding virtue in soldering, since tracking

(Continued on Page 9)

1957 REMEMBRANCE DAY CONTEST RESULTS

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STATE TROPHY

Western Australia 972 points

CALL AREA AWARDS

Phone:	Points
VK1PM—R. E. W. May	777
3ATR—T. B. Rodda	854
4FP—J. F. Pickles	634
5MG—J. McG. Moffatt	726
*5LJ—R. Lewis	88
6TH—T. H. Talbot	697
7PM—P. D. Mulligan	583
9HO—H. T. Overend	314

C.W.:	Points
VK2QL—F. T. Hine	471
3XB—I. Stafford	409
4JF—J. G. Files	196
5MY—H. M. Roberts	299
*5TL—T. Laidler	127
6VK—V. J. Kitzney	96
7CH—C. Harrison	401
9WP—W. A. P. Luke	35
0AB—A. C. Hawker	402

Open:	Points
VK2RS—D. C. Haberecht	969
3ATN—T. R. Naughton	1228
4DP—D. M. Portley	731
5WO—A. Condon	1003
*5FM—H. Bowman	129
6RU—J. E. Rumble	1146
7KA—K. E. Millen	479
8DB—D. Beadel	583

Listeners:	Points
VK2—N. L. Dash	477
VK3—A. C. Stebbing	736
VK4—C. H. Thorpe	820
VK5—F. W. Aslin	951
VK6—C. J. Anderson	407
VK7—R. R. de Balfour	1035
VK9—R. L. Clark	314

* Northern Territory.

NEW SOUTH WALES

VK2RS Open	969	Average	890.3
1PM Phone	777	Licenses	1156
2AHH Open	636	Logs	59
2PN Open	611		
2XQ Open	587		
2AHH Open	552	Total Pts.	725.5

Phone:					
VK2AEZ	471	VK2GI	127	VK2AJA	40
578	528	2AIM	106	2VW	40
2AWN	286	3PL	80	2NV	40
2ACD	204	2TF	82	2HK	39
2AJL	178	2ABO	76	2AVI	39
2AAJ	160	2XT	53	3RU	34
2ALA	154	2APQ	47	2CN	33
2AGJ	154	2ADL	46	2ACB	18
2SR	149	2AOU	44	2AQR	13
2FM	144	2AJY	40	2AHA	10

Open:					
VK2BO	536	VK2ADT	222	VK2GW	90
2AGH	388	2AJQ	178	2ANU	78
2AJO	279	2RC	172	2VN	78
2ARV	375	2AWQ	143	2HE	89
2AFA	232			2EC	30

C.W.:					
VK2QL	471	VK2BA	163	VK2EG	111
2EL	380	2HO	133	2OW	47
2YB	256	2EO	115	2PV	43

VICTORIA

VK3ATN Open	1228	Average	789.8
3HG Open	888	Licenses	1093
3ATR Phone	854	Logs	70
3DQ Phone	631		
3ADW Phone	588	Total Pts.	849.1
3AGG Phone	549		

Phone:					
VK2H	511	VK1AUG	185	VK3QZ	81
2AIT	486	3AKF	183	3TK	58
2ZU	448	3KR	175	3AWF	54
3BB	444	3AXW	173	3U	49
3ADV	386	3WY	154	3AXU	45
3APS	377	3ADU	134	3ZE	45
3ALP	344	3ALE	123	3BL	43
3ABT	323	3YQ	121	3ALD	38
3SK	289	3ATS	103	3VQ	34
3AQK	206	3AOM	82	3AGP	28
3ALJ	204	3ALL	84	3APJ	26
3FY	207	3AZR	75	3RN	23
3LR	243	3DG	72	3HC	22
3AN	219	3DY	68	3AVM	16

QUEENSLAND			
VK4DP Open	731	Average	470.3
4FP Phone	634	Licenses	387
4WJ Phone	381	Logs	50
4OV Phone	365		
4DI Open	358	Total Pts.	534.4
4DJ Phone	353		

Phone:					
VK4NG	265	VK4BW	65	VK4ZZ	23
4DK	237	4SN	64	4JE	17
4TF	180	4EP	60	4AF	17
4BR	156	4RH	56	4BJ	15
4VW	131	4ZW	48	4CB	15
4VS	134	4EP	50	4NJ	15
4RJ	121	4XR	48	4XJ	15
4ER	116	4CN	46	4XM	14
4LN	108	4RW	31	4HA	13
4JA	104	4GG	29	4FR	11
4LE	74	4EC	23	4RE	10
		4HD	23		

Open:					
VK4FH	238	VK4DO 4FE	184 170	VK4NU	187
C.W.:					
VK4JF 4CJ	156 81	VK4AQ 4KK	25 18	VK4AW 4KY	13 10
Check Logs: VK4 4HI and 4SH.					

Check Logs: VKs 4BI and 4BH.

SOUTH AUSTRALIA

VK5WO Open	1003
5AF Open	843
5MG Phone	726
5KM Phone	715
5DK Phone	634
5EF Phone	498

Average	736.5
Licenses	416
Logs	86
Total Pts.	588.7

Phone:	Points
VK3QW 468	VK3PM 57
82B 407	8PT 55
8GM 397	8CJ 53
8KV 369	8ON 48
8SV 361	8LA 47
8JC 338	8CY 47
8FY 308	8CH 45
8LT 271	8AB 41
8CO 238	8SX 41
8HN 253	8LB 40
8LC 234	8FO 39
8CC 208	8PS 37
8FQ 194	8WH 33
8AX 169	8LN 31
8FJ 161	8WN 31
8KD 147	8XU 31
8OK 129	8AO 30
8TI 118	8MA 29
8AP 110	8SA 24
8GP 108	8WI 22
8KY 102	8ZL 18
8TW 89	8D 16
8SS 85	8MK 17
8RR 83	8CA 16
8KC 71	8DH 16
8BG 68	8DO 14
8LQ 67	8MS 11
8RK 63	8EC 8

Open:	Points
VK3KE 338	VK3TW 42
8JT 316	8HM 39
8JG 77	8GW 8
8qr 71	

5G	77	5GW	8
5QR	71		
C.W.:			
5AX	75	VK3EA	37
5OR	72	5RX	36
5BZ	54	5BY	36
5KU	52	5BO	28
5HQ	52		

Check Log: VK3L.

NORTHERN TERRITORY

Phone:	Open:	C.W.:
VK5LJ 83	VK5FM 129	VK5TL 187
		SUM 25



Remembrance Day Trophy retained by West. Australia

Open:					
VK3HE	285	VK3YS	118	VK3JE	102
3PR	166	3JI	112	3CH	70
C.W.:					
VK3XB	489	VK3NK	83	VK3CB	24
3ZA	179	3AND	68	3KL	24
3ZC	174	3ARV	65	3PG	10
3ZO	181	3CX	49	3PL	13
3ARQ	184	3JF	40	3OL	11
		3KH	36		

Check Logs: VK3B, 3GE, SUM.

Disqualified Log: VK3JO, valid contacts 4

Check Logs: VKs 2BQ, 3GE, 3UM.
Disqualified Log: VK3JO, valid contacts 4.

WESTERN AUSTRALIA

VKGRU Open	1146	Average	700.5
6FD Phone	880	Licenses	219
6TH Phone	697	Logs	85
6BE Open	824		
6MO Phone	576	Total Pts.	972.4
6NF Phone	280		

Phone:

VKGCL	371	VKGAD	30	VKSMR	18
6ZZ	380	6VC	30	6SR	18
6ZZ	102	6TK	29	6MB	18
6TB	85	6WI	29	6RO	18
6CP	84	6FL	28	6WS	18
6BR	84	6TR	27	6VMS	17
6AV	83	6OR	26	6JG	18
6RW	82	6LU	25	6MM	15
6CN	79	6AT	24	6TK	15
6WZ	77	6EW	23	6FW	15
6KE	71	6HK	23	6TP	15
6DX	70	6KW	23	6KP	14
6MG	64	6GB	22	6TK	14
6RO	51	6RK	21	6TY	14
6LL	43	6FT	20	6MK	13
6LM	43	6BA	20	6JF	13
6HS	38	6AL	20	6OY	13
6GX	34	6MY	20	6GH	13
6KJ	33	6SJ	20	6AG	13
6HR	32	6SF	19	6RS	13
6TR	31	6WM	19	6AH	11
	OXI	19			

Open:

VKGWG	71	VKGGA	25	VKGUG	18
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C.W.:

VKSVK	88	VKGJA	35	VKSCR	19
6E	82	6CK	33	6WW	18
6UP	73	6JA	30	6WT	18
6ES	42	6WH	30	6JB	18

Insufficient valid contacts: VKs 6TX, 6WU, and 6ZL.

TASMANIA

VKTPM Phone	583	Average	489
7RL Phone	571	Licenses	121
7SM Phone	530	Logs	50
7KA Open	479		
7CH C.W.	401	Total Pts.	691
7JP Phone	370		

Phone:

VKTGC	381	VKTJA	107	VKIDR	30
7MC	381	7GA	99	7WI	29
7WA	374	7BI	83	7RK	28
7BT	283	7EJ	82	7AL	27
7AI	288	7KM	82	7LE	26
7SF	263	7BQ	83	7CK	26
7LS	237	7KC	83	7CT	26
7BR	227	7CF	46	7PF	13
7RN	208	7JD	37	7LL	13
7FC	200	7DW	21	7FJ	8

Open:

VKTJO	267	VKTOM	180	VKTAC	133
7FM	248	7BD	134	7LZ	85
7BJ	184			7AG	17

C.W.:

VKTJY	87	VKTIL	23	VKVDG	13
TRY	48	1GB	17	1ST/P	11

PAPUA-NEW GUINEA

VKGDB Open	863	Average	449.5
6XK Open	649	Licenses	48
6NT Open	330	Logs	8
9HO Phone	314		
9BW Phone	271	Total Pts.	524.4
9FN Phone	250		

Phone:

VKSWG	22	VKVPW	35
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ANTARCTICA

C.W.:	
VKQAB	402
QAS	283

LISTENERS' SECTION

NEW SOUTH WALES

N. L. Dash	---	477	D. W. Shepherd	239
D. Gantley	---	373	VKCEDM	236

Disqualified Logs: B. J. Foster, B. Harwood.

VICTORIA

A. C. Stabbing	---	738	I. R. Woodman	---	571
WIA-L3005	---	738	WIA-L3008	---	571
G. R. Morris	---	685	C. T. Tully	---	571
I. Drysdale	---	681	H. M. Hillard	---	571
I. J. Hunt	---	681	R. J. Dempster	---	571
WIA-L3007	---	682	E. W. Trebilcock	---	571

QUEENSLAND

C. H. Thorpe	---	830	L. O. Tully	---	335
A. G. Loveday	---	469			

SOUTH AUSTRALIA

F. W. Aslin	---	---	W. J. Clayton	---	250
WIA-L5020	---	821	WIA-L5015	---	250
J. S. Crawford	---	441			
WIA-L5001	---	441			

WESTERN AUSTRALIA

C. J. Anderson	---	407			
Disqualified Logs:			B. Prosser, F. H. Price,		
F. W. L. Hardwick	---				

TASMANIA

R. A. de Balfour	1935				
Disqualified Log:			J. P. Wilson		

PAPUA-NEW GUINEA

R. Clark	WIA-L5001	314			
Disqualified Log:			F. B. Lee		

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VKTGW	15129	180	169 41
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ZLIMQ	1180	55	39 20
ZL2GS	8388	129	104 36
ZLAGA	3672	83	70 24

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821 Split Stator 25 x 25 pF., two end plates, 3 1/4 in. square	3 1 0
822 Split Stator 50 x 50 pF., two end plates, 2 1/4 in. square	3 14 2
831 Split Stator 100 x 100 pF., two end plates, 2 1/4 in. square	5 11 3
834 Differential 100 x 100 pF., two end plates, 2 1/4 in. square	5 9 1
835 Single Section 230 pF., two end plates, 2 1/4 in. square	3 14 3
836 Single Section 100 pF., one end plate, 2 1/4 in. square	3 3 7
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503 Single Section 60 pF.	1 0 0
503 Split Stator 25 x 25 pF.	10 4
504 Buttery 34 x 34 pF.	19 5
515 Single Section 100 pF.	1 5 6
526 Single Section 140 pF.	1 6 8
527 Buttery 15 x 15 pF.	1 2 2
528 Single Section 27.5 pF.	17 9
529 Single Section 34 pF.	1 0 0
719 Differential 25 x 25 pF.	10 4
728 Single Section 100 pF.	1 18 7
729 Buttery 8 x 8 pF.	1 3 2
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1015 Choke, 1.25 " "	4 9
1011 Choke, 4.5 microhen.	3 8
1022 Choke, 1.5 millihen.	7 8
1098 Choke, 15 " "	9 0
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WARNING!*

BY ZLIWI

Last Field Day I learned a little about batteries, the hard way, so I am passing on my experiences.

Two 6 volt batteries were being charged from a motor generator for about two hours, and were gassing vigorously. I went to take them off charge and the first two more. I was removing the first clip when there was a loud report and something grazed the side of my face. The battery caps had been loosened, but not taken out prior to charging. One of these caps was missing. Later half of it was found.

When a battery is being charged, hydrogen is given off. Mixed in certain proportions with air, an explosive gas is formed. Presumably when I lifted off the clip and broke the charging circuit, a spark ignited the gas, blowing off the cap.

It needs little imagination to think of what might have been the result, had the cap hit me in the eye instead of a glancing blow, or had acid been blown out of the cell.

The following precautions are suggested when charging batteries:

1. Either stop the motor generator or break the charging circuit by disconnecting one of the leads at the generator, where a spark does not matter. It is assumed that the generator is a few feet away from the batteries.
2. Do not bend over the batteries when changing clips, but stand to one side, keeping the face clear.
3. No smoking!!!

2 and 3 also apply when testing batteries with a hydrometer, as acid can easily be splashed when emptying the hydrometer.

Should acid be splashed into an eye it should be immediately washed out with water. Every second's delay increases the damage done.

Where does one get water from in a hurry on a field day? Before the field day starts, several clean bottles should be filled with clean water and kept handy to the batteries during charging, and not used for anything else.

I also felt that the charging of batteries could be improved. Charged batteries were getting short on Sunday and the charging rate was increased to 20 amps. After some of the batteries had been charging for two or three hours the cases were getting very warm to touch. If the outside of a battery is warm, then the inside must be a lot hotter, and heat is one of the things that damages a battery.

It would seem that 10 amps. for 6 volt and 5 to 6 amps. for 12 volt batteries is the maximum continuous charge if the batteries are not to get unduly hot.

HOW'S YOUR SOLDERING?

(Continued from Page 5)

down a poor or intermittent connection later can be as frustrating as trying to put a raw oyster in a parking meter.

SOLDERING IRONS

The selection of equipment is more or less a matter of personal choice. The present-day market displays a wide variety of soldering pens, guns, and irons of all shapes and sizes, with and without thermostatic control. Experience dictates that at least two sizes are almost an absolute must. Perhaps the most generally useful soldering iron for general building, as well as repair work, is the 60-watt size. This size is small enough to get into fairly tight spots, but still has enough capacity for the heavier connections that are typical of transmitter tank circuits. A fine follow-up for occasional heavy work is the fast-acting two-speed 200-250-watt soldering gun.

A reasonable amount of care should also be used in the selection of solder. Never use reclaimed solder in the con-

struction of electronic equipment of any kind. (If the solder is reclaimed it should be clearly marked on the end of the spool.) By the same token, avoid bargain solders and you'll avoid bargain connections. And always use rosin flux on radio gear.

As is true in all pursuits, experience is the best teacher. The knack of being able to solder almost anything at will comes after exposure to several discouraging defeats. One cannot expect to master soldering in a few easy lessons, but one can improve upon his present ability, regardless of experience, by assuming that there is possibly a little more to learn about it.

PERMITS GRANTED FOR TELEVISION EXPERIMENTS

VE— New South Wales
217/T—W. R. Beveridge, 18 Murdoch St., Turramurra.
227/T—N. L. Southwell, 90 Dutton St., Yagoona.
2A31/T—H. G. Hine, 13 Kelvin Ave., Panania.
2AWE/T—D. Andrews, 21 Warwick Ave., North Hyde.
2ZBQ/T—R. R. Fenton, 50 Cabramatta Rd., Cabramatta.

Victoria
37Q/T—A. Simmons, 40 Simmons St., South Yarra.
3YR/T—W. D. Robb, 11 Derry St., Essendon West.
3AAK/T—C. S. Rann, 2 Georgiana St., Sandringham.
3AMN/T—L. D. McNabb, Lot 62 Paton Rd., Boronia.
3AUX/T—C. R. Hughes, 3 McMillan St., Elsternwick.
South Australia
3GL/T—C. D. L. Tibbrook, 10 Cornuna Ave., Colonel Light Gardens.

CHANGE OF ADDRESS

W.I.A. members are requested to promptly notify any change of address to their Divisional Secretary, not direct to "Amateur Radio."

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JUNE 1957



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- Over one thousand additions, alterations and deletions since the last edition, making more than three thousand amendments since the 1954 edition.
- DX Countries, Prefixes and their Zones.

6U8

SHARP CUT-OFF PENTODE

MEDIUM-MU TRIODE, SHARP CUT-OFF PENTODE

The Radiotron 6U8 is a 9-pin miniature valve containing a medium-mu triode and a sharp cut-off pentode in one envelope. It is designed primarily for use as a combined oscillator and mixer valve in f.m. and television receivers using intermediate frequencies up to 40 Mc.

The pentode mixer unit of the 6U8 provides low grid No. 1 to plate capacitance as compared with a triode mixer and also has a low output capacitance. The low value of capacitance between grid No. 1 and plate minimises feedback problems often encountered in mixer circuits operating with intermediate frequencies between 30 and 40 Mc.

Base: 9-pin miniature.

Socket connections:

- Pin 1—Triode plate.
- Pin 2—Pentode grid No. 1.
- Pin 3—Pentode grid No. 2.
- Pin 4—Heater.
- Pin 5—Heater.
- Pin 6—Pentode plate.
- Pin 7—Pentode cathode, pentode grid No. 3, internal shield.
- Pin 8—Triode cathode.
- Pin 9—Triode grid.

Electrical Data

Heater voltage 6.3 volts
Heater current 0.45 amp.

Characteristics:

	Triode	Pentode
Plate voltage	150	250 volts
Grid No. 2 voltage	—	110 volts
Cathode-bias resistor	50	68 ohms
Amplification factor	46	—
Plate resistance	5000	400000 ohms
Transconductance	8500	5200 amhos
Grid No. 1 bias for plate current of 10 mA	—12	—10 volts
Plate current	18	10 Ma.
Grid No. 2 current	—	3.5 Ma.

CONVERTER SERVICE

Maximum Ratings:

Plate voltage	300°	300° volts
Grid No. 2 (screen) supply voltage	—	300° volts
Grid No. 2 voltage	—	125 volts
Grid No. 1 (control-grid) voltage: positive bias value	0°	0° volts
Plate dissipation	2.7°	2.8° watts
Grid No. 2 input: For grid No. 2 voltages up to 150 volts	—	0.5° watt
Peak heater-cathode voltage.		
Heater negative with respect to cathode	90°	90° volts
Heater positive with respect to cathode	90°	90° volts

* Maximum.

The Radiotron 12BY7 is a high transconductance pentode designed for use as a wide band video amplifier where the plate supply voltage is low and large output voltages are required with low values of plate load resistors. Such an application is the video output stage of a television receiver.

The valve has a 9-pin miniature base and has a centre-tapped heater to permit operation from either a 6.3 volt or 12.6 volt supply.

Base: 9-pin miniature.

Socket connections:

- Pin 1—Cathode.
- Pin 2—Grid No. 1.
- Pin 3—Grid No. 3, Internal Shield.
- Pin 4—Heater.
- Pin 5—Heater.
- Pin 6—Heater Centre-Tap.
- Pin 7—Plate.
- Pin 8—Grid No. 2.
- Pin 9—Grid No. 3, Internal Shield.

Electrical Data

	Series	Parallel
Heater voltage	12.6	6.3 volts
Heater current	0.3	0.6 amp.

CLASS A1 AMPLIFIER

Maximum Ratings:	
Plate supply voltage	300° volts
Grid No. 3 (suppressor) voltage	0° volts
Grid No. 2 (screen) voltage	175° volts

D.X.C.C. LISTING

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cor. Cnt. No. rises	Call	Cor. Cnt. No. rises
VK4PJ	31 303	VK3BO	31 161
VK4JTN	36 193	VK4JD	1 159
VK4HR	12 182	VK4KS	9 133
VK4RU	3 181	VK4KW	4 139
VK4SE	3 179	VK4RW	23 147
VK4EE	10 163	VK4EN	11 141

New Members

VK4TE	37 115	VK4LE	36 101
VK4HW	26 111	VK4ACN	30 101

C.W.

Call	Cor. Cnt. No. rises	Call	Cor. Cnt. No. rises
VK4PJ	31 303	VK4KS	30 210
VK4JH	15 238	VK4BY	45 202
VK4KE	10 235	VK4EO	3 191
VK4SE	6 232	VK4VL	30 178
VK4RU	8 211	VK4EL	16 175
VK4XU	46 213	VK4EL	9 175

Amendments

VK4BO	33 171	VK4JT	34 135
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New Members

VK4ARV	56 105	VK4OW	56 161
--------	--------	-------	--------

OPEN

Call	Cor. Cnt. No. rises	Call	Cor. Cnt. No. rises
VK4ACX	31 234	VK4K	12 216
VK4PJ	32 233	VK4HG	2 201
VK4IR	7 233	VK4NS	16 195
VK4SE	4 231	VK4OW	30 182
VK4RU	8 232	VK4EL	16 175
VK4XU	61 231	VK4GD	13 171

Amendments

VK4JT	63 131
New Members	
VK4ARV	56 107

Grid No. 1 (control-grid) voltage.

Negative bias value	50° volts
Positive bias value	0° volts
Grid No. 2 input	1° watt
Plate dissipation	6.25° watts
Peak heater-cathode voltage:	
Heater negative with respect to cathode	200° volts
Heater positive with respect to cathode	200°+ volts

Characteristics:

Plate voltage	250 volts
Grid No. 3 connected to cathode at socket	
Grid No. 2 voltage	150 volts
Cathode-bias resistor	68 ohms
Plate resistance (approx.)	90000 ohms
Transconductance	12000 amhos
Plate current	25 Ma.
Grid No. 2 current	6 Ma.
Grid No. 1 bias for plate current of 20 mA	—10 volts

Maximum Circuit Value:

Grid No. 1 circuit resistance:

For cathode-bias	1.00° megohm
For fixed-bias	0.25° megohm

* Maximum.

† The d.c. component must not exceed 100 volts.

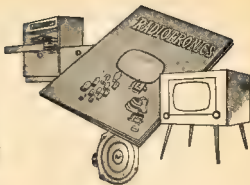
W.I.C.E.N. NOTES

Because it is necessary to submit January Notes early we are restricting this notice to first ten rules in Section Two of Instruction to W.I.C.E.N. Operators.

2.0 OPERATING PROCEDURE

- 2.1 ALL procedure used shall comply with the requirements of the "Handbook for Guidance of Operators of Amateur Wireless Stations".
- 2.2 Time System: Local time shall be used by all stations unless requested to do otherwise by appropriate authority.
- 2.3 When transmitting time, each digit shall be pronounced separately.
- 2.4 A signal log shall be maintained at each station. NOTE: In an emergency, a log would not be maintained by stations in the emergency area.
- 2.5 Frequencies to be used will be as assigned from time to time.
- 2.6 When a net frequency is in use a station desirous of carrying tests shall first listen on the frequency to ensure that it will not cause harmful interference to other stations. Further, the test call shall be limited to two seconds in the case of telephony, the test shall consist of spoken numerals, followed by the call sign of the station transmitting the test signals. C.W. transmission will consist of a series of Vees followed by the call sign of the station.
- 2.7 General Call Control stations requiring to transmit information to all stations likely to intercept, shall preface such transmissions by the General Call—"All Stations" or "All Stations Emergency Net"—followed by "This is" and the identification of the calling station.
- 2.8 Stations replying to a general call shall answer in the order previously laid down. If any station does not answer within five seconds the next station in order shall carry on.
- 2.9 Before transmitting, every station shall listen for a period long enough to satisfy itself that it will not cause harmful interference. If such interference is likely, the station shall await the first break.
- 2.10 When a station hears a call without being certain it is intended for it, it shall not reply until the call has been repeated and understood.

REACH



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FULL ADDRESS

Australian DX C.C. Alphabetical List of Countries by Prefix

The list of Countries hereunder and as amended from time to time in Federal Awards Notes is the Official List to be used in connection with the issue of the Australian DX C.C. Award.

The list below shows first the Prefix, the Country, and the Zone Numbers in parenthesis (as used for "CQ" W.A.Z. award).

AC3-Slides	(22)	HB1, 9-Switzerland	(14)	PX-Andorra	(14)	Iceland	(32)
AC4-Tibet	(23)	HC-Ecuador	(10)	PY-Brazil	(11)	VR6-Pitcairn Island	(32)
AV-Pakistan	(21, 22)	HC6-Galapagos Island	(10)	PZ1-Neth. Guiana	(9)	VS1-Singapore Island	(28)
BCV (C3)-Formosa	(24)	HE-Liechtenstein	(14)	SM-Sweden	(14)	VS2-Malaya	(28)
C (unofficial)-China	(23, 24)	HH-Haiti	(8)	SP-Poland	(15)	VS4-Sarawak	(28)
C3-See BV.		HI-Dominic. Republic	(8)	ST-Anglo-Egyptian		VS3-Brunei	(28)
CR-Manchuria	(24)	HK-Colombia	(9)	Sudan	(34)	VS8-Hong Kong	(24)
CE-Chile	(12)	HK0-Archipelago of San		SU-Egypt		VS9-Aden and Socotra	(21)
CE7Z, LU-Z, VK0, VP8-		Andres & Providencia	(9)	SV-Crete	(20)	VS0-Maldives Island	(22)
Antarctica	(13, 29, 30)	HI-Korea	(25)	SV-Crete	(20)	VS3-Sultan. of Oman	(21)
CE0-Easter Island	(12)	HP-Panama	(7)	SV-Dodecanese	(20)	VU2-India	(22)
CM-CO-Cuba	(8)	HR-Honduras	(7)	TA-Turkey	(20)	VU4-Laccadive Island	(22)
CN2, KT1-Tangier Zone	(35)	HS-Siam	(26)	TF-Iceland	(40)	VU5-Andaman and	
CN3-French Morocco	(33)	HV-Italian City	(15)	TG-Guatemala	(7)	Nicobar Islands	(21)
CP-Bolivia	(10)	HZ-Saudi Arabia	(21)	TI-Costa Rica	(7)	XE-Mexico	(8)
CR-Cape Verde Is.	(35)	II-Italy	(15)	T19-Cocos Island	(7)	KW8-Laos	(28)
CR5-Port. Guinea	(35)	II-Trieste	(15)	UA1, 3, 4, 6-European		KZ-Burma	(28)
CR5-Principe, Sao		IS, MS4-Ital. Soma'land	(37)	R.S.F.S.R. (15, 16, 17)		YA-Afghanistan	(21)
Thome	(36)	IS1-Sardinia	(15)	UA9, 6-Asiatic		YI-Iraq	(21)
CR6-Angola	(36)	JA, KA-Japan	(25)	R.S.F.S.R. (17, 18, 19, 25)		YJ-See FUS.	
CR7-Mozambique	(37)	JY, ZC7-Jordan	(20)	UBS-Ukraine	(16)	YK-Syria	(20)
CR8-Goa (Port. India)	(22)	JZ0-Neth. New Guinea	(28)	UC2-White Russia		YN-Nicaragua	(7)
CR9-Macau	(24)	K, W-United States of		S.S.R.	(18)	YO-Roumania	(20)
CR10-Port. Timor	(28)	America	(3, 4, 5)	UD8-Azerbaijan	(21)	YS-Salvador	(7)
CT1-Portugal	(14)	KA-See JA.		UF6-Georgia	(21)	YU-Yugoslavia	(15)
CT2-Azores Island	(14)	KA0-Bonin and Vol-		UG6-Armenia	(21)	YV-Venezuela	(15)
CT3-Madeira Island	(33)	cano Islands	(27)	UH6-Turkoman	(17)	ZA-Albania	(15)
CX-Uruguay	(13)	KB8-Baker, Howland		UI6-Uzbek	(17)	ZB1-Malta	(15)
DJ, DL, DM-Germany	(14, 15)	and Amer. Phoenix Is.	(31)	UJ8-Tadzhik	(17)	ZB2-Tadzhik	(14)
DU-Philippine Islands	(27)	KC4-Navassa Island	(8)	UL7-Kazakh	(17)	ZC3-Christmas Islands	(29)
EA-Spain	(14)	KC6-East. Caroline Is.	(27)	UM8-Kirghiz	(17)	ZC4-Cyprus	(20)
EA6-Balearic Is.	(14)	KC6-West. Caroline Is.	(27)	UN1-Karelo-Finnish		ZC5-Brit. Nth. Borneo	(28)
EA8-Canary Is.	(33)	KG1-See OX.		Rep.	(16)	ZC6-Palestine	(20)
EA9-Irni	(33)	KG4-Guantanamo Bay	(8)	UO5-Moldavia	(16)	ZC7-See JY.	
EA9-Rio de Oro	(33)	KG6-Mariana Islands	(27)	UP2-Lithuania	(15)	ZD1-Sierra Leone	(35)
EA9-Spanish Morocco	(33)	KH6-Hawaitian Islands	(31)	UQ2-Latvia	(15)	ZD2-Nigeria	(35, 36)
EA0-Spanish Guinea	(35)	KJ8-Johnston Island	(31)	UR2-Estonia	(15)	ZD3-Gambia	(35)
EL-Ehre	(14)	KL7-Alaska	(1)	VE, VO-Canada	(2, 3, 4, 5)	ZD4-Gold Coast, Brit.	
EL-Liberia	(35)	KM8-Midway Island	(31)	VK-Australia	(29, 30)	Togoland	(35)
EQ-Iran	(21)	KP4-Puerto Rico	(8)	VK0-See CETZ, LU-Z,		ZD6-Niassaland	(37)
EQ2-Eritrea	(37)	JP6-Palmyra Group,		VP8.		ZD7-St. Helena	(36)
ET-Ethiopia	(37)	Jarvis Island	(31)	VK0-Heard Island	(39)	ZD8-Ascension Island	(36)
F-France	(14)	KR6-Ryukyu Island	(25)	VK0-Macquarie Island	(30)	ZD9-Taiwan da Cunha	(38)
FB-Algeria	(38)	KS4-Swan Island	(7)	VK0-Cocos Island	(30)	and Gough Island	(38)
FB8-Amsterdam and		K56-American Samoa	(32)	VK0-Nauru Island	(28)	ZE-St. Rhodesia	(38)
St. Paul Is.	(39)	KT1-See CN2.		VK9-Norfolk Island	(32)	ZK1-Cook Island	(32)
FB8-Kerguelen Is.	(38)	KV4-Virgin Islands	(8)	VK9-Papua Territory	(28)	ZK2-Niue	(32)
FB8-Madagascar	(38)	KW6-Wake Island	(31)	VK9-Ter. of New Guin.	(28)	ZL-New Zealand	(32)
FC-Corsica	(15)	KX6-Marshall Islands	(31)	VO-See VE.		ZM6-British Samoa	(32)
FD-French Togoland	(35)	KZ5-Canal Zone	(7)	VP1-British Honduras	(7)	ZM7-Tokelau (Union)	
FE8-Fren. Camerouns	(38)	LA, LB-Jan Mayen	(40)	VP2-Leeward Island	(8)	Iceland	(31)
FE8-Fren. West Africa	(35)	LA, LB-Norway	(14)	VP2-Downward Island	(8, 9)	ZP-Paraguay	(11)
FG-Guadeloupe	(8)	LA, LB-Svalbard	(14)	VP3-British Guiana	(8)	ZS1, 2, 4, 5, 6-Union of	
FG-Saint Martin Is.	(8)	LU-Argentina	(13)	VP4-Trinidad and		Sth. Africa	(38)
FG-Vietnam	(38)	LU-Z-See CETZ, VK0.		Tobago	(9)	ZS2-Marion Island	(38)
FK8-New Caledonia	(32)	LX-Luxembourg	(14)	VP5-Cayman Island	(8)	ZS3-South West Africa	(38

ANOTHER W.L.A. PUBLICATION



AMATEUR RADIO STATION LOG

PLATE XXIII. The same, inside.

NEW FORMULA

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Hull Contest rules. Old voices are there in force now that the "local contact, one point" rule is no longer valid. And who is going to be the first Z call to receive the W.A.S. certificate? Divisional rivalry is keen.

NEW SOUTH WALES

Meeting The V.H.I. and T.v. Group held its monthly meeting at Gore Hill Technical College on Friday, 6th December, at 8 p.m. After a very smart disposal of formal business, this well attended meeting was treated to a colour film screening of the whaling industry at Byron Bay, N.S.W. We are deeply indebted to Mr D. P. Shute for bringing and showing us this film.

A lecture by Professor Winch then followed. The Professor, suitably attired in cap and gown, delivered a most learned discourse on the "Infinite Current Aerial," otherwise known as "JOA's Two-BoB Spout." Bob demonstrated mathematically that he had been able to achieve a gain of over 2,000 with this type of aerial. He was congratulated on his achievement by Jim 2PM and a vote of thanks was carried by acclamation.

Among the visitors present were Bruce 12CM (formerly of Coffs Harbour), Stuart 12DF (Newcastle), Ron 12BG and Bill 12AC.

Monthly Day Fixture was held on Sunday, 19th November, and was a mobile Fox Hunt. It is some time since the Group has had this type of event in daytime and as apparently no other group in the area was holding one, hounds were not present to participate. The fox (Dick ZECF) started from Baultham Hills and followed a route that led through Kentburn, Marrota, Sackville, Windsor, and Blackburn, and terminated at the latter place. The fox was intercepted by John EANT, four times during the day, John, with Bob ZOZ as co-pilot, thus became the outright winner of the event with a score of nine points. Second was Jim ZECF who scored one point for being first to the end. The only other hound participating was John ZEVV.

Monthly Ighl Fox Hunt was held on 27th November. This event for the first time in some months reverted to a straight out hidden fox hunt. The fox on this occasion was Bob SOA who was well hidden at Seaforth. First in was Jim ZZBO who made it in 55 minutes. In second place was Phil ZZBB with the 1ANT/HO combination in third. Other bounds present were ZZCF, ZZAV, ZAWZ.

Scramble: A surprise scramble, held after the usual Sunday evening broadcast, resulted in a clear win for John 22AV. Many stations tied for second place.

During the Month of November the I mx band has been wide open in Newcastle on several occasions, resulting in 2ZDL and 2ZDF working many Sydney stations. Wal 3KZ has been having narrow escapes from bush fires in the Blue Mountains. Neville 2DR (Blayne) has been out of action since his beam was blown down. Jim 2ZBD has now become 2PM 3ER.

VICTORIA

Group Meeting.—The meeting on Nov. 30 was attended by 30 members. After meeting at the rooms at 8 p.m., the group moved off to the Radio Maintenance Section of T.A.A. at Essendon. There, Ron JAH gave interesting talks on various bits of modern airborne equipment on display. At the conclusion of the display, the hosts provided coffee for the gang, all of whom had enjoyed themselves thoroughly.

Field Day—The first field day was reasonably attended despite the overcast weather. Stations in the field included 3VF at the Streptococcus 32AM, Mt. Ridley 32AM, ZDZ at the City Hall, 32AT at the Boat 32AM, District 32AM, 32CC at Mt. McDonald and 32CN in the Pentland Hills. All stations except 32AT worked 2 mx (David's gear broke down) and 32AT and 32AL worked 6 mx, whilst 3VF and 32AL had 288 mx. Results are not to hand at the time of writing. The first day was the 21st of the month coinciding (intentionally) with the National Field Day, so be in it and kill two birds with one stone.

Band Jolage—Frank ZDW, situated near the top of "JEG mountain" has an overpowering signal on 36 Mc. now. Ken 3AFJ is fairly active on both 1 and 6 mx, whilst Max JATK is having troubles with his 7193 oc. Gordon ZKEI at East Burwood appears to be the newest station on 2 mx. Welcome, Gordon.

Interstate stations have been coming through on 8 mhz frequently enough to keep the gang on their toes. It is heartening to see some of the old-timers coming back on 8: 3PG, 3BW, 3AHL and 3SP are back, whilst newcomers include 3ZDB, 3ZDJ and 3ZCG (at Moel). I hear that some fine openings have taken place to the west on 3 mhz, but I have no details—perhaps next month when I have more time.

The notes are fairly short this month because I have had exams for the past three weeks and at the time of writing have another fortnight of the things to endure. Therefore I have had neither time nor energy to devote to "mail reading" or note scrounging. However, if I am able, I will try to do better next month.—32AQ

SOUTH AUSTRALIA

The main item this month is the activity on 2.3 MHz where just about everyone who has (or has an 8 meg. rack, is back on the job feeding into various arrays ranging from 4 el. Yagi's to 40 m. folded dipoles. Some of the frequencies heard being SMT 502 and v.f.o., GGF 51, 5KC 528, SKC 501 and 51, NZAW and 58W 508, 5QR 50 504, ZBZA 51, 5XV 502, with 5AX, 5ZAX, both active on the band, but frequencies not noted as yet.

Col SROB using about 40w into an 829D, John SZRA also has an 829B in the line. Neil SZAW uses his new 4 el. beam and the 125 Ann; were you surprised Neil when the indicator gave upward modulation? George 8GB has a converter covering the full range 40 to 60 megs, that will stand looking at. He a bit of a v.h.f. urger, tried to talk me into 40 megs "in five minutes", anyway, will get to it some day, George. Ray SZBN is building a mx gear, so will soon be heard there.

All of these boys have been doing great things when the break-throughs happen, and working all VK areas in turn. In fact one night I was in the 1000 Hz. Kitchin's 1000 Hz. was on channel 1 on a V.v. rc. No, it's not mine, but belongs to a keen type here who is building one and was at my QTH for a test. Rather an expensive v.h.f. converter, but it worked well, and when on channel 1 with the g.d.p. providing signals to give the 8.5 meg. band, brought all the signals on in at great strength. In fact Col SRO and Keith BMT, who were picking off VKs and VKs at the time, were followed with great ease, at also were the other two. They were in fact in the 1000 Hz. as an idea to get on 6 quickly, or at least the 1000 Hz. side of it.

There is a very keen w.h.f. man in Bill
Simulator who lives at Sealcliff, he is another
w.k. constructor and has had a fair measure
of success. More important to us though, is
that he has been keeping a very complete log
of "conditions" for w.h.f. propagation, weather
maps, temperatures, humidity, band noise,
etc., etc., with the idea of developing some
patterns to enable prediction to be made from
day to day.

There is a chance Norm, spot him out with an application form and you are bound to collect, and as far as vhf types are concerned seek him out for information on this subject, for he is anxious to meet up with the gang.

Two metres has shown a burst of activity, too, in that more signs are heard here anyway, and is probably due to the cross-band duplex made possible by the use of 50 megs. The Ross Hull Contest will no doubt bring them all out of hiding now, so all old acquaintances will be renewed.

Hughie SEN heard occasionally with good strength, working Keith SMT, but conditions not at peak by any means as yet, so keep plugging my friend. Ern SEN heard trying to make it through to Adelaide again, but not very strong. Try 6 mx Ern, and you will be in it again.

288 Mc. has been quiet, most of those boys have been trying for their c.w. and neglecting the bands as a result, but that didn't hold up the activity of SKY, SJK, SZDY, SXA and SZBX

SDE (ex SZDF by the way) went portable some time back at Salisbury, and wanted SZBX \$Y each way. George used a 18 el beam, and a pair of 716's. Brian SZBN is now 7JR, and Keith SZDR, Rick SZDX, and Ron SZDY have all passed the hurdle and awaiting two-letter calls, with Brian SZBX awaiting news that he made it also. Congrats fellows, and best of luck to the many others going through the same hoop at present.

Rex SKY is experimenting with a 5-tube superhet on 288 Mc, hope it works out fellow; if it does, what about an article for the magazine to pass on your ideas and what you found out?—SEF

WESTERN AUSTRALIA

The V.h.f. Group's Fox Hunt took place on Sat., 9th Nov., starting from King's Park as usual, EBO was in charge. Rolo took great pains to make everything a success, but unfortunately gremlins crept in, much to Rolo's disgust. The tx was some distance away from the power supplies and mod. etc., on the river bank, in fact there was a stretch of water between, with power lines, etc., running

(Continued on Page 18)

Frank P. O'Dwyer, VK3OF
190 Thomas Street,
Hampton, Vic.

Forewell the trans-equatorial scatter until the next equinox and with it the regular contacting of JA stations by our northern Hemisphere stations. I am sure that you will not be mistaking as well—there is always the chance that conditions may suit that medium of propagation, so during daylight hours keep careful watch for the trans-equatorial scatter. Not that you need any warning the way VK signals have been popping in from north, south, east and west. Bob 4NG says that trans-equatorial scatter worked to a time extent of several commercials and ending at 10:00 PM the same time each night, whereas a layer reflection may happen any time during daylight hours. Signals coming by the short path are not QSB, and not only the JA stations. One morning 4NG heard an American voice ending CC DX on the band, but call remained undisturbed. Who were more eager to hear than he. So there are more signs in the first KH9 contact for the season? They were not infrequent in the past. KH9UL is setting the pace and giving something to work for with his routine transmission on 50.225 Mc. as listed last month.

November opened with a quiet week for Interstate contacts, then satisfied the gang with some lively openings all around the country. From the 10th to the 13th, a wave opened every evening of the week with the severest west openings (Nov. 10, 12, 23) which brought the first intensive contact for the VK3 stations working VK3 and VK3RR in VK3 western district. All Melbourne stations were inactive, apparently recovering from the acid rain which had hit the city on the 10th, at good strength in Melbourne—not by any Ham but by several enthusiastic listeners who have monitored the band for many years. On the 14th, the VK3 stations were back on the air. Melbourne stations were there to take advantage of the conditions and over a period of 20 minutes quite a few good contacts were made. The 15th was a quiet day, but on the 16th this week was the late hour at which the band remained open, contacts taking place up to 2500 on several nights. The week finished with the usual good contacts for VK3 stations. Bat. Nov. 33

The last week of the month let the gang build up their energy for the commencement of the Ross Hull Contest, Dec. 1. Wed. produced a highlight when VK4NG contacted VK6BT, good signals each way, so putting VK6 back into the picture. Same night, Bob was putting a patchy 58 µg into Melb, but no contacts were made. As a prelude to the Ross Hull Contest and an indication of what to expect, the last day of the month brought VK4 well into the picture down south, the band being open from 0900 until 1530.

The lament of the month came from Bill WDW (Hribane) at 2237 on Nov. 21 when he complained that he had lost his voice in the hectic rush of working WKZ, 3, 5, 7, there were so many signals on the band he didn't have time to say "Goodbye." Presumably the most pleasing aspect of the opening is the greatly increased number of stations on the band in all States, new call signs belonging to both full and limited licensees appearing frequently. Rarely does a CQ go unanswered in Melb. and the same appears to be true of the other Australian States. As for the Z, the DX chaps are getting out of the Interstate DX, truly wishing their desire for full tickets and the use of all bands.

Vern 4LK, Charters Towers, 350 miles northwest of 4NG Rockhampton, passes comment on the openings. He has had a lean time since the JA run finished, relieved by a good QSO with Sid 3CI, Nagambie. So both ways, Vern could not hear the Melb. gang, active 80 miles to the south. Frequently 4NG puts 59 plus signals into Melb., while Vern a bit to the north just cannot do it. His most consistent openings are to VK3.

Another station to look for is located at Marquarie Island on 80190 Mc. Transmission shall probably commence during January '58, possibly before.

The Contest Committee and F.E. are to be commended for the way in which they have revived the 30 Mc band by altering the Ross

Phyl Moncur
235 Union Road
Ascot Vale, Vic.

MEG AND CON.

Meg Ohm and Con Denner are two good old radio gals with terribly clever husbands—Menas, you know. They meet regularly for QSO (Iquines, Sausages and Oranges) and this is how it goes—

"Hello Con, how are you and how's your OM's new rig going?"

"Oh, fine, Meg, just fine, and what's new with you?"

"Well Con, my OM's still trying to get his old one working, he works on 40 metres, you know."

"Gooh, Meg, that must have cost him a packet, 40 metres, but what on earth does he want all that many for? I counted up seven meters in my OM's shack and I'm quite sure he doesn't use half of those even. But do you know what, the other day he went and bought a new one. An 'ome meter, he calls it. Terrible careless he is, always droppin' 'is H."

"Well Con, the next thing my OM is going to build is some gear for 7 megaphones. Your OM told him he ought to go on 378, but if he goes I'll leave him, that's what I'll do. Heavens, 378 megaphones! Just imagine the noise, why we'd have all the neighbours complaining."

"Meg, I want to ask you something personal. Do you know who this fellow CQ is? My OM's always calling him, but I never hear him come back. My belief is he's a female because everytime I creep up and listen at the shack door, my OM stops calling CQ pretty pronto and just goes over to some other OM. He knows very well I don't like him talking to women. I've put my foot down on that ever since the time I heard him telling an American

YL that his resistance was low and that he had too much impedance—meaning me, I suppose."

"Me Con, I don't like my OM talking to women either. When we first got married he told me that radio was a safe hobby for a man, and that I'd have a lot to be thankful for because I'd always know where my husband was. But I don't know, the other night I heard him asking a YL if she'd change her frequency. Now what do you make of that?"

"Well, I won't know Meg, but it doesn't sound too good, does it? My OM's always talking about changing his frequency; now if only it was his underclothes or his socks, I'd be all for it."

"Then Con, the next thing is, he asks her for her QTH and on top of that he says he will give her a call on phone tomorrow evening, so apparently she's given him her telephone number, too."

"Well Meg, I wouldn't stand for it if I were you, I'd tell him off."

"But Con he doesn't take any notice of me, everytime I criticise him he just puts time on and turns it up as loud as it will go so he can't hear anything I'm saying."

"Yes Meg, I know how it is, my OM is always making the most terrible noises with his wretched wireless sets too. And I say to him: 'What on earth are you doing in there?' And he answers back: 'Just tickling the cat's whisker, Con.' And you know darn well by the awful screech that he's trodden on the poor cat's tail."

"Well what I really object to Con, is all the money he keeps spending on his wireless and wouldn't think of buying me a thing. And the latest is some talk about motor-boating. Well, if he thinks he's going to buy a motor boat as well as all that wireless junk, he's got another thing coming."

"Well, what do you think my OM says to me, Meg, when I asked him to buy me a new dress. He says: 'Con, you don't need a new dress, you've got plenty of dresses and besides you look beautiful to me in a strip of insulation tape'."

"There's one thing, Con, I must say for my OM, and that is that he did come good and build me a rotary clothes line. Real modern one it is with four lines for the clothes, but the only trouble is he's gone and put it up on the roof on top of a 40 ft. pole and how

on earth he imagines I'm going to climb up that pole with a basket full of washing under one arm and the bag of pegs under the other, well, I just can't imagine."

"The latest at our place, Meg, is a HC348 receiver, but the OM's having trouble with the oscillator."

"Goodness gracious Con, you amaze me, I never dreamt they would have had receivers back in 348 BC. Well Con, I'll have to go back as I am expecting the OM home soon. He went to town today to buy an AR88. Well, 88 means love and kisses, and AR means end of message, and I'm so excited I can hardly wait for him to pull the big switch tonight."

V H P

(Continued from Page 15)

through the water and to make things easier, dry batteries were used for the tx filament. This is where the gremlin crept in, they started to take the knock and in his checking, changed crystals—farol to change back, was off the air for 30 mins., causing the hounds much worrying. Never mind, Frank 6CC's super rig, which is not sensitive to frequency change, brought him in first with 6HK second and 6ZAV third. Much fun was had by all.

Don 6HX and his YXL got hitched on 23rd Nov. Leaving for their honeymoon, they were chased by 6TA and 6WJ and many rounds of the Caseway circuit were made before the boys let them go. The best wishes of the Group go to Pat and Don in their venture.

The meeting on Monday 15th at D.C.A. eventually finished up at Solo 4BC's QTH—the cause? Nobody thought about picking up the keys—"wouldn't it!" Wally Caxon, B.A.G. an old-timer, was a welcome visitor and gave a very interesting talk on Tools and Their Uses in Amateur Radio, also photo printings of circuit, etc., from books. Most of the younger members of the Group, especially were very pleased with the tips and short cuts that Wally gave. Once again, Wally, many thanks.

34 Me.—No break throughs to the time of writing.

144 Me: 6BO and 6WC, Albany, working on phone, 230 miles, most mornings—6ZAV.



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NOTES

FEDERAL

A WORD OF THANKS

As the Old Year closes and the New Year opens it is again necessary to give some thought to those members who have given time and energy to the job of keeping the Wireless Institute of Australia functioning.

It so happens that many of these duties are of an unspectacular nature and because they do not attract the spotlight of publicity rather tend to be forgotten.

On behalf of members Federal Executive would like to say "thank you" to all who have helped.

THOSE "EI" CALLS

It is interesting to note that the Honorary Secretary of the Irish Radio Transmitters has stated that calls of the series EI have never been issued to Radio Amateurs in Eire. These calls are reserved for the use of commercial stations.

THE I.O.V. SET-UP

Following on the successful efforts by Amateurs in reporting the recent satellites, some Here has been evinced in the set-up of the reporting organization.

There is shown a small portion of a section of Interest to Amateurs, and it shows how reports and their way to the Smithsonian Institution.

The Wireless Institute is most fortunate in that it has as its representative on the "Moon-watch" Committee none other than the Federal Councillor for VKS, Gordon Bowen. Those who heard Gordon handling reports on VKSWI during the recent satellite alerts will realize what a splendid job he is doing for the Institute.

Frank's affliction, which has already claimed the sight of the left eye, is the result of an accident. He intends to continue operating on phone on all DX bands and possibly may continue c.w. as well.

Bill Storer, VKIEG, who is acting as QSL Manager for Class Hawker, VKGAB, reports that all cards received in mid November have been answered.

The fall off in QSL traffic through this Bureau during October proved, as expected, only a temporary respite, for cards soared again in November. Despite the implications, writer wishes all good hunting in 1958.

—Ray Jones, VKBRJ, Manager

NEW SOUTH WALES

The November meeting of the New South Wales Division held at Science House, Gloucester Street, Sydney, on Friday evening the 22nd had an attendance of eighty members and visitors.

An excellent lecture was given by Mr. Neville Williams on Techniques in Television Receiver Construction. Mr. Williams covered the design of i.v. antenna indicating that some of the finer points used in construction of antenna for Amateur bands had to be discarded when designing a t.v. antenna. This was necessary to enable multi-band coverage to be obtained.

Points on the construction of the tuner, i.f. strips, the various oscillator circuits, and a.c. circuits were also covered, the choice of components for the various stages was discussed.

Comparisons were made between the various disposal type 8 and 8 inch tubes available and many useful hints were given in the use of such tubes. To demonstrate the different types of components a very large range was on display and included a 31 inch receiver which gave very good results under very poor receiving conditions.

This was a very enlightening lecture, both for those who have already built a t.v. receiver and those who are contemplating such a project.

Charlie 2AWQ moved the vote of thanks on member's behalf and was carried by acclamation from those present.

Several matters of business were discussed including the purchasing of a number of the latest text books for the Divisional Library. These have now been procured and will be

CAN YOU HELP?

Federal Executive requires the services of a Federal Secretary during the time that Doug. Bowie, VK3SDU, is abroad.

The position is a temporary one and will cover a period of about six months from Easter 1958.

If you live in Melbourne and can help with this interesting job would you phone Fed. Sec., Doug. Bowie, at WF 5504 or write Box 2611W, G.P.O., Melbourne, C.I.

record of all stations and regional groups ready by the New Year.

A report was given by Arthur 2AJA on the progress made with the erection of the poles at Dural, four 80 ft. masts have been erected and soon the antennae will be in place.

The Chairman, 2APQ, gave details of a 23 k.v.a. emergency power supply which has been procured for WT at Dural.

The meeting closed at 11 p.m.

A very successful Field Day was held on 17th Nov. at Gosford. For the past few years Joint NSW and Victorian Field Day and Hunter Branch members has been held at Way Way. The change to Gosford renewed interest in this day. The efforts of the newly formed Central Coast section in organising the day's activities was very commendable. 84 members registered and the total attendance of families and friends brought the number to over 200.

The two main events each carried a 6149 and cup as first prize. The 7 Mc. Scramble was won by Bill 2YD of Newcastle, and the 14 Mc. Hidden Transmitter Hunt was won by Dick 2ZCF, of Sydney. Great interest was displayed in the disposal gear, all of which was acquired by those present. It is understood that plans are already being made for next year's event. Those who did not attend missed one of the best days held. The Divisional Broadcast was originated at the location using 2ARQ's 3 m.x. mobile gear for a relay to BRU who retransmitted on 7 Mc. Unfortunately, a very high noise level prevented all reports being taken.

Talking of relays, experiments carried out at WVE and during a portion of the weekly broadcast via a 3 m.x. link have been very successful and when all the problems have been cleared, it is hoped that many innovations will be included in the broadcasts and another step in the W.I.C.E.N. organisation completed.

We were very pleased to be host to KJDK at Dural and give members the opportunity to hear Jerry during our news broadcast. If

CONTEST CALENDAR

Compiled by W.I.A. Fed. Contest Com.

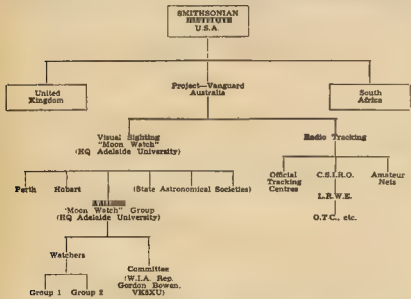


ROSS HULL MEMORIAL—
Bands 60-34, 35-62, 144-149, 228-236 Mc.
Date: 1st December to 31st January.
Rules: As published. * Amendment 60-34 Mc. Scoring on 60-34 Mc. as for 56-80 Mc. Special Award: Greatest distance over 3,000 miles.

B.E.R.U. (C.W. Contest)—
Date: 25th January to 29th January, '58.
Duration: 0201 G.M.T., 1958, to 2550 G.M.T., 20th.
Rules: As for 1957.
* Amendments: Sections: High Power, Low Power (25 watts limit), Recruiting Section.

NATIONAL FIELD DAY—
Date: 26th January.
Rules: See "A.R." December, 1957.

W.A.E.D.C.—
Dates: C.w.—3rd Jan-5th Jan, 1958.
Phone—4th April-8th April, 1958.
Times: 1800 to 2400 G.M.T.
Duration: 1 hour.
Freq (a) C.w.—2.5, 7, 14, 21, and 35 Mc.
(b) Phone—14, 21 and 35 Mc.
Rules: Apply P.C.C.



FEDERAL QSL BUREAU

The following changes in the W QSL Bureau set-up are notified W2 and K3—North Jersey DX Association, Box 55, Arlington, New Jersey W2 and K3—Julian Oberg, W9DSO, 2801 Gordon Drive, Bloomer, Illinois.

In a QSL to BERS88, Frank Robb, G17K7, mentioned that his eyesight is failing rapidly. Frank has operated in over 50 countries in the past 20 years and must be well known to scores of VK c.w. men. It is understood that

available to members through the library service; watch for details in your Bulletin.

Bob 2ARG, the Divisional W.I.C.E.N. Coordinator gave a resume of the replies received from members interested in the W.I.C.E.N. organisation and passed around for members to see an official C.D.O. map on which were marked the locations of stations who have signified their willingness to participate in the scheme. If you have any ideas or queries on W.I.C.E.N., Bob will be very pleased to hear from you, as he hopes to have a complete

BOOKS OF INTEREST TO ALL RADIO AND T.V. ENTHUSIASTS

- ★ "HOW TO MAKE GOOD TAPE RECORDINGS," by C. J. Le Bel 19/3, 9d. postage.
- ★ "HIGH FIDELITY"—Gernsback Library 15/6, 9d. postage
- ★ "HI-FI HANDBOOK," by Wm. F. Boyce £1/12/0, 1/- postage
- ★ "HOW TO INSTALL AND SERVICE INTERCOMMUNICATION SYSTEMS
by Jack Darr £1/14/3, 1/- postage
- ★ "BEAM ANTENNA HANDBOOK," by Wm. I. Orr £1/9/0, 9d. postage
- ★ "RIBBONS OF SOUND," by Karl A. Barleben £1/5/8, 9d. postage
- ★ "UNDERSTANDING HI-FI CIRCUITS," by Norman H. Crowhurst £1/11/3, 1/- postage

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at any time you know of visitors to Sydney, let them know they will be very welcome at 4WI Dural to meet members over the weekly broadcast.

Although the formation of a listeners' section has been put before you very little interest has been shown. However it is felt that there are a number who would be interested but have not heard of such a group or know how to form one. Please write to the Secretary. As this is so closely allied with Amateur Radio members intend to advertise the idea and advise those interested to contact the Secretary, Box 1734 G.P.O.

Now that Xmas is over, we trust you all enjoyed the best of good things, and trust that 1934 will be all the better for it.

The first Divisional event for 1934 will be the 8th Annual Hamfest commencing at the monthly meeting on 24th January and continuing in the afternoon and evening of 25th and Sunday 26th.

Country members intending to attend are requested to advise the Secretary should they require accommodation booked.

The Saturday afternoon and evening rendezvous will be at 2WI Station, Quarry Rd., Dural.

VICTORIA

The December meeting of the Victorian Division, being family night, was easily the best attended meeting for the year. Nearly every seat in the theatre was occupied and this added to an attendance of about 120. A very fine master for Christmas (JYS) and his willing helpers who put on a really enjoyable night for all.

The meeting started off with the usual preliminaries, including the admission of new members. The programme was then settled down to dispose of the vital business of the night. This included a very appropriate selection of films, a visit by Father Christmas (JCV) with toys for the harmonica and a supper which left nothing to be desired.

Fred did a very commendable job in arranging the programme and he carried out his duties of host in the true spirit of the occasion. Credit is also due to the team who made this night possible by the donation of food, toys, and time, and to the team who assisted our President in making the night the success that it was: Mrs. Monser, Mrs. Dennis, Mrs. Lancaster, Mrs. Higgins, Mr. Clark, Ken Milbourn, Keith Roget, Maurice Waters, Gordon Dennis, Len Monser, and George Robertson. No doubt there were others who were hiding their light behind a bushel and to these I offer a vote of thanks and an apology for missing them in my search.

The only visitor for the evening was BAYE and he hope he enjoyed his stay with us.

You wouldn't need about it! Secretary Jay (2LI) fell off a stationary train and broke his left leg. That's his story anyway, and he had his damaged arm along to the meeting to prove it. Don't know the repair time, Jay, but hope it's not just keep away from the DX while you are home, that's all.

Would anyone like the job of Federal Secretary while Doug (3DU) takes a six months' rest overseas next year? I don't know, but it's within his power to be as soon as possible. Don't assume that the duties will not be onerous while he is gone. Most be saving up those things for the future, are they? Here's hoping he is also going to tell us of his experiences whilst overseas at a future lecture. How's about it, Doug?

We were very sorry to learn that our Administrative Secretary, Mrs. May, was unable to attend the Christmas meeting due to a

death in the family. Our deepest sympathy, Mrs. May, to you and yours in your time of sorrow.

Full members admitted to the Institute at the meeting were Messrs. C. de G. Macmillan (3ZD), J. C. Burbridge (3AVV), and Associates Messrs. C. R. Sanderson, C. J. Buckley and D. J. Goss.

Don't forget. There is no general meeting of the Division in August so the first meeting for the new year will be on the first Wednesday in February which is the 5th. The lecture night which will be held on 26th will be announced in these notes prior to the meeting and over the Sunday morning broadcasts. These broadcasts will be given each Sunday morning commencing at 10.0 hours, right throughout the holidays, so listen out for the news and views of the Division at these.

The South Western Zone has given notice of its next Convention to be held at Warrnambool in March of the new year. Those intending to go along will need to make bookings before the middle of February. Listen to the Sunday morning broadcasts for further details.

SOUTH WESTERN ZONE

The zone is very active on the hook-up each Thursday night. There has been very good attendances and the main topic is preparing for the next convention to be held at Warrnambool on 22nd and 23rd March, 1934. We do, so let's hope to see some turn up at this gathering. There has been a v.h. activity, also six hunts, etc., so let's hope some of the Melbourne clubs will turn up, also chaps from all zones. There will be a prize for the chap who travels the longest distance to the Convention.

Please note: All who intend coming to the Convention must send a £1 deposit for accommodation and also 10/- for the dinner on Saturday night. Bookings are to be sent to Bill Wines, at Crawley St., Warrnambool, who is the organiser.

A Happy New Year to all from South Western zone members.

EASTERN ZONE

Five cars went down to Colac for the State Convention last night. George (2CG) worked some of the stations on 3 mhz whilst mobile. Everyone enjoyed themselves and having 3D and 4YI were donated a piece of surplus gear for transport. The 3 mhz was the fox and used stacked halos. Les (2CN) and Ian (2CF) were the winners. The Eastern Zone was also very active, with a v.h. activity. Jack, George and Geoff had a v.h. toweling on display and several boys climbed it, so that Ian (2LN) could make a movie record.

On our way home, one of the boys was booked for having a swim on the car. Claimed to be an obstruction to vision, so all fox hunts in the zone are cancelled until further notice pending approval of other foxes, as usual, by the State Police. The Secretary of the W.I.A. is now attending to this matter.

George (2CG) and Geoff travelled to the top of Mt. Macedon recently. They had 20 mhz, and had 29 contacts. They had difficulty in getting down the mountain side as they got snowed in overnight.

Ian (2AV) is now back on 40 and 80 mhz using his portable gear, until the high power equipment is re-built. We welcome two new zone members on the air, Alan (2CF) at Hastings, and Stewart (2DD) at Pakenham.

Hope everyone of the zone had a very enjoyable Christmas, and I wish you all a bright and prosperous new year.

WESTERN ZONE

We were sorry that we did not have one of our members at the State Convention which was held in Colac recently. However, we were pleased that Leigh (3I), of the South Western Zone, could represent us, so thanks a lot Leigh.

Activity in the zone seems to be increasing. We are expecting some new stations on the air soon. Another two stations are building new or re-modelling their old rigs. Jim (2H) of Hopedown, is on the air again after some months of inactivity caused by the fire which destroyed his home and caused a few months ago. He intends to build a high powered rig around a Geloso v.f.o. unit, but at present there are no plans, so he is wondering if any of you chaps have a spare, or else want to dispose of. He would swap his mobile rig for one if anybody is willing. Jim will

always be pleased to see any Hams who happen to be in his locality. Trev (2AT) has regular skeys with Chas (6AR), of Davis, and a couple of other stations expect to be contacting Chas during the next month or so.

MOORABBIN AND DISTRICT RADIO CLUB

The annual general meeting was held on 15th November with an attendance of 20. The President, Stan Beaton, reviewed the events of the past year, and the annual elections followed, with the following elected as office-bearers for 1934: President, Stan Beaton, Vice-President, Jack (2ZF); Sec. and Publicity Officer, Laurie (2CN); Treasurer, Ken (3AC); Asst. Sec. and Hon. Auditor, Ian (2XC); Transmitting Officer, Frank (2OF). Committee members: Ed (3SM) and Arthur (3AWO).

At the general meeting which followed the annual meeting, the Certificate Officer, Bill Alder, announced with pleasure the award of the Club Certificate of honorary membership to the first German station to qualify, DL1IB. Don't forget to let DX stations know they need only five contacts with member stations to win this handsome certificate. VK stations need fourteen contacts. So go to it, chaps!

Hasn't recent rain at night been complaining about his 30 mhz beam was Bob (2AV) trying to re-erect his beam at the present QTH. Bob found that, whether he shortened or lengthened the elements, the resonance was always less. Just like a cat chasing its tail. Here's hoping it loads well now, Bob.

Don't forget, if you live anywhere near Moorabbin, then on the first and third Fridays of each month at the Library, Moorabbin Town Hall. There is to be no more night in January, and our next meeting will be on 17th January. General meeting and members' re-union. Visiting Hams are always made very welcome. So come along—we guarantee you will enjoy yourself!

QUEENSLAND

MARYBOROUGH

4DJ now has an Edgetone "750" and is hearing many more signals. Graham's quads for 15 and 16 metres were put on a 23 ft steel pipe, erected and christened. Trimming operations are now in progress.

Archie (4CB) is still active on 10 mhz and bemoaning poor conditions. Received a 7F QSL with four I.R.C. coupons! How lucky could he be?

A four element G4ZU is now on the tower at 4BG and so far has been tried on 15 and 20 metres. It has done well on both bands. Between 15 and 20 mhz it has done 20 mhz. A small front-to-back ratio on 20 mhz. Is only thing needing improvement.

4AI is due to come to life again. He has a converter going on 15 mhz and should soon be heard there.

TOWNVILLE

Two new members for next year turned up at the final club meeting in 1933, but at the residence of 4BX. This augurs well for the

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Victorian Division

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commences

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or the Class Manager on either of the above evenings.

W.I.A. N.S.W. DIVISION

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will be held on

25th JANUARY, 1934

at

VK2WI

QUARRY ROAD, DURAL

New Year. The three who faced the barrier at the main had been patiently awaiting results. One received his notice of failure by air letter and the other two still keeping their fingers crossed. Better luck next time, I should say. As for the local 11 and his Associate, he has been transferred. It was decided to have a social get-together amongst the boys for the winter months, with the local 11 taking the opportunity of meeting the new R.I. The date of 11th Dec. was decided on and all present were to get in together. Members and non-members interested in Amateur Radio, etc., to be present. Sorry to see you go, Alec, our loss is Hobart's gain.

The things over the past month have been very good. The local 11 has not been lived up to its reputation. Allan APS was heard on this band working into Europe for several days. The local 11 has been in the beam, awaiting locating of windmill tower. Bob APF has his tower up, lucky enough to get the tower free for the taking away. Interest in 144 Mc. seems to have waned again because the old timers just cannot be interested to give it a go and help the Z boys along. What a pity.

Again no word from the Coalfields, must be busy down there. Most other towns and districts show up on 7 Mc. at least for a regular broadcast.

Colin ACE almost finished a t.v. rx and hopes to see and hear Channel 3 from way down south. Vern watching the short sport on 90 Mc. and Colin is doing the possible. Bob 4TK again helping out with news and forecasts. Basil 6ZW still re-building, came on for a few days, but he has been a bit of a mess and had audio trouble; not heard since. Andy 4BW giving time ticks at 7 a.m. for the gang to start the session. A strong signal on 144 Mc. on usual frequency but goes off the air at 7 a.m. and leaves channel free. Andy also planning new all-band rig. John BUK is busy and has been heard occasionally on the air. Vern 4LK interested in 50 and logging literally hundreds of Japs and goes to the end of QRM. Colin 4M is still a hope. Alex 4MA, at Mt. Garnett, heard from time to time either in early mornings or late afternoons on 40 Mc. in charge of local news. The army but has been trying out new aerials and getting better results. Norm BNT not heard since he went to Rabaul. His mate, Bob, is probably in the same boat. Redcliff. Bob 4TK still playing around with his all-band final and getting done on 40 Mc. 4DF at Alderney. The local 11 has the hook-up with his presence and hopes to get on more in the new year. Believe one 4RW fell by the wayside recently and omitted to tell the gang. Nick 4VT came in recently operating air/mobile. Vic 4BJ, at Beautiful Bundy, wants to build a rig from an old car circuit. The local 11 seems to help out with language difficulty.

As these are the first notes to appear for 1958, I wish each and everyone a good year of DXing. 73 Bob.

SOUTH AUSTRALIA

Our last get-together was a clear demonstration that the main body of members handle Amateur Radio as a hobby and just that. A healthy sign that promotes clear thinking and the placing of our interesting hobby in its right place, from which arises the most outlook and behaviour claimed as our motto.

The lecture of the evening was an absorbing one, and was presented by the local 11, RDH, with the mechanical help of Norm Coleman, and was on Diesel Traction. Dave has the background and knowledge fitting him to put the local 11 in the lead. The local 11 takes him right into the thick of diesel locomotives and railway gear right at the engine, and he was working out the answers to the many questions hurled at him by the would-be engine drivers in the audience.

An exceptionally well attended meeting, with a good section of visitors, gave eager attention to the whole proceedings and were not behind in seeking further information on the technical details of the machinery described. I gave a brief history of the evolution of railway traction leading to the economical diesels and explained in detail the modern diesel-electric loco and its advantages and the more simple (1) multiple rail cars now so common on country and suburban lines.

The comparison of costs of running these new jobs compared with even the latest steam driven locos was an eye opener to most and some of the boys were working out the locos the S.A.R. would need at the annual saving per unit that would wipe out the

national debt and make travel free. We must put that to Dave some day and get his reaction.

Sufficient to say is that with an improvement of average output of 20 per cent., and with an average operational range of 1,000 miles between fuelling, it is easy to see where these economies arise, which is apart from the fuel saving of 50 per cent. less than half of road.

Very detailed slides were shown, some with dimensional outline and others showing the various stages of a G.E. diesel engine. The classes of locos presently in use here, together with the modern passenger trains that for this State supply our answer to the electric trains used in the more populous areas, and practice work.

Many thanks Dave for an interesting and instructive lecture, which as Keith SKH said when moving the vote of thanks, was well received as question time demonstrated. Grats to the programme committee for organising the evening.

The remainder of the evening was given over to general business, QSL card distribution, providing a smoke between times, new members (9 adf) were accepted, and Jim 5JK gave a report on progress of W.C. Band, and practice work.

Brian SCA called prospective class members together who retired to an adjacent room to arrange their forthcoming programme, which hotted down to theory on Tuesday nights at 8.30 and 9 p.m. and practicals on Thursdays at 7.30 p.m. with Bruce 5OR at the helm. A good start off was noted on their first class night with 18 in the room. The local 11 was present who was the chap talking to Norm and re-questioning an entry form? Looked to me like Doc. Surely he doesn't want to learn x's work!

Did you know John SKN's lawn mover has been upset? Well, it has, because first of all it has not been previously reported, of a she, and a 4-tooth, not 3. Furthermore, we are informed that the lawn does not require such a large area.

A little bird, or was it the horse's mouth, tells me Brian SCA is retiring from Secretaryship at the end of the financial year. It is a sad exit due to pending losses in marital status, or should it be said assuming that status. Whatever it is, Brian will be doing just what we will be doing, and I am sure of course with him all the best as Secretary to the new duo.

The W.C. B.C. boys had another get-together to thrash out details of procedure on message handling, given by Jim 5FO and Jim 5JK, whilst John SKK went through the operational set-up of the 122 call with particular emphasis on netting, a very interesting evening with some of the boys throwing in some ideas on increased and more efficient use of the net. Ended up with arranging another test programme that will have been held prior to publication of these notes.

An adjourned meeting was necessary to complete the ratification of items put through the last Federal Conference, so you can see there has been a busy time for all interested in the S.W. Division of late.

Our new town Elizabeth had its second birthday recently, and amongst the many colourful and active set up was the oval up to the one manned by John 5GL, 5HA, 5JM and some willing helpers, with a mass of gear collected from the local 11 and the boys. Radio aids in extending goodwill. Some interesting contacts were made and the attendance to view the proceedings were good. Hot weather with the sun beating down on the gear in the open, and on the operators, made the going a bit tough for a while, but it was noted that all the boys were in the net. One was distinctly cold by the look of relief John displayed when checking his grid drive. Les Hitchens, of Perth, W.A., paid a visit recently, whilst the local 11 returned home from a round Australia trip, and looked one of the boys over, nice to see you Lee.

One Sunday recently heard 5JK calling 5MD on 80 Mc from O'Halloran Hill. No answer from Doc, but he was being seen. I kept moving closer until he did make it—guess how close—yes, at the big barred gate. Try a 5AX pre-amplifier, they are good.

The recent Sunday morning when 7 Mc. short skip was poor, was able from here (Gawler) to make the city on 15, so crank up the 15 and you city slickers and let's keep in touch.

It's not known how many of you heard this, but at a recent Saturday night session on 40 Mc heard a very strong modulated carrier playing the A.B.C. programme on 7800 Kc. and simultaneously another one with a strong carrier on 110 Mc. The switching off his carrier at the end of the item to cover the announcer and switching on

again when the next item started. Then, just to make the game harder, he zero beat his carrier with anyone who called CQ, just made a mess of the band for the whole afternoon. May be should organize a bit and locate these clever boys for there is enough trouble on that band without some smarty deliberately fouling it up. Who has some ideas on this subject?

Finally, the picnic again. The venue has been advised already, the committee are anxious that it be well attended, and have made necessary arrangements to look after you and all the harmonics, so roll along and make a day of it. If you are doubtful on any detail, contact the local 11. The local 11 and they will put you right. Get some bowling practice in and see if the phone men can do it again.

TASMANIA

NORTH WESTERN ZONE

I trust you have all had a Hoppy Christmas in the full meaning of the words, and that the XYZ gave you the piece of pudding with the 411 in it, and in return for it.

Have been relieving Leon 7JP at Queenstown for most of December. Leon is in the process of changing his QTH to 8JP, so 7JP will not be on the air for some time.

As mentioned last month, Myles McGinnis, on King Island, only had his morse to do for his bid ticket. Myles bid, now received, the cell sign of 7MF and has been adding to the QRM on 40 Mc with his No. 11 set. Even with W.C. on a w.c.

Enquiries show that Ken Brown has been frequenting the auction sale in Burnie, he obtained an old 130 Ma. power supply for about 3.40. John 13U well had forgotten about the day Ken, or I might have run up a few dB.

Field Day in Ulverstone very successful. Sid TSB did a good job by hiding the tx close to Dennis 7DR's place which didn't seem to help Dennis because he was last to find it. First home was QTH to Jim 12U apparently had that many accessories there was no room for the kitchen sink. Even a protector on the 12U. All the best for the coming year, and to all our associates—keep trying.

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